

Serial No. 09/819,516
Docket No. NEC N00-1101
Amendment D under Rule 116

AMENDMENTS TO THE CLAIMS:

Please cancel claims 1 and 7-14, without prejudice, and amend claims 20 and 25, as shown below.

This listing of claims will replace all prior versions and listings of claims in the Application:

Claim 1 (canceled)

Claim 2 (previously presented): A gas treatment apparatus comprising:

an outer tube having a gas inlet port connected to a gas supply system for receiving gas and a gas outlet port connected to an exhaust pipe, and defining an inner space;

a wafer boat provided in said inner space and holding plural wafers spaced from one another in a predetermined direction;

an inner tube provided between said wafer boat and said outer tube and elongated in said predetermined direction; and

a gas feeder provided between said inner tube and said wafer boat, connected to a said gas inlet port and defining a gas passage gradually reduced in cross section in said predetermined direction, and formed with a plurality of like gas outlet holes equal in open area and equally spaced in said predetermined direction for blowing said gas to said wafers,

wherein said gas feeder has a narrow end surface, a wide end surface, a convex outer surface extending between said narrow end surface and said wide end surface, a concave inner surface extending between said narrow end surface and said wide end surface and spaced from said convex outer surface and semi-cylindrical side surfaces connected between one of the side lines of said convex outer surface and one of the side lines of said concave inner surface and

HAYES SOLOWAY P.C.
130 W. CUSHING ST.
TUCSON, AZ 85701
TEL. 520.882.7623
FAX. 520.882.7643

175 CANAL STREET
MANCHESTER, NH 03101
TEL. 603.668.1400
FAX. 603.668.8567

Serial No. 09/819,516
Docket No. NEC N00-1101
Amendment D under Rule 116

between the other of said side lines of said convex outer surface and the other of said side lines of said concave inner surface, and said gas inlet port is connected to said gas feeder at a position closer to said wide end surface than said narrow end surface.

Claim 3 (previously presented): The gas treatment apparatus as set forth in claim 2, wherein said gas outlet holes are formed in said inner concave surface on a virtual line extending from said wide end surface toward said narrow end surface.

Claim 4 (previously presented): The gas treatment apparatus as set forth in claim 2, wherein said outer convex surface and said inner concave surface are opposed to the inner surface of said outer tube and said wafer boat, respectively, and said gas outlet holes are formed in said inner concave surface.

Claim 5 (previously presented): The gas treatment apparatus as set forth in claim 3, wherein said virtual line is a generating line of said concave inner surface, and is substantially in parallel to a centerline of said wafer boat.

Claims 6-14 (canceled)

Claim 15 (previously presented): A gas treatment apparatus comprising:
an air-tight vessel having a gas inlet port connected to a gas supply system, a gas outlet port connected to an exhaust system and an inner space defined therein;
a retainer provided in said inner space and retaining plural wafers arranged at intervals;
and

a gas feeder connected at one end portion thereof to said gas inlet port and having a gas passage reduced in cross section from said one end portion toward another end portion of said

HAYES SOLOWAY P.C.
130 W. CUSHING ST.
TUCSON, AZ 85701
TEL. 520.882.7623
FAX. 520.882.7643

175 CANAL STREET
ANCHESTER, NH 03101
TEL. 603.668.1400
FAX. 603.668.8567

Serial No. 09/819,516
Docket No. NEC N00-1101
Amendment D under Rule 116

gas feeder and a plurality of like gas outlet holes equal in open area and equally spaced along a virtual line connected to said gas passage for blowing said gas toward said plural wafers,

wherein said gas feeder has a narrow end surface, a wide end surface, a convex outer surface extending between said narrow end surface and said wide end surface, a concave inner surface extending between said narrow end surface and said wide end surface and spaced from said convex outer surface and semi-cylindrical side surfaces connected between one of the side lines of said convex outer surface and one of the side lines of said concave inner surface and between the other of said side lines of said convex outer surface and the other of said side lines of said concave inner surface, and said gas inlet port is connected to said gas feeder at a position closer to said wide end surface than said narrow end surface.

Claim 16 (previously presented): The gas treatment apparatus as set forth in claim 15, wherein said gas outlet holes are formed in said inner concave surface on a virtual line extending from said wide end surface toward said narrow end surface.

Claim 17 (previously presented): The gas treatment apparatus as set forth in claim 15, wherein said outer convex surface and said inner concave surface are opposed to an inner surface of said air-tight vessel and said retainer, respectively, and said gas outlet holes are formed in said inner concave surface.

Claim 18 (previously presented): The gas treatment apparatus as set forth in claim 16, wherein said virtual line is a generating line of said concave inner surface, and is substantially in parallel to a centerline of said retainer.

Claim 19 (previously presented): The gas treatment apparatus as set forth in claim 15, wherein said wide end surface has a generally crescent shape.

HAYES SOLOWAY P.C.
130 W. CUSHING ST.
TUCSON, AZ 85701
TEL. 520.882.7628
FAX. 520.882.7643

175 CANAL STREET
ANCHESTER, NH 03101
TEL. 603.668.1400
FAX. 603.668.8567

Serial No. 09/819,516
Docket No. NEC N00-1101
Amendment D under Rule 116

Claim 20 (currently amended): The gas treatment apparatus as set forth in claim 1,
A gas treatment apparatus comprising:
an outer tube having a gas inlet port connected to a gas supply system for receiving gas
and a gas outlet port connected to an exhaust pipe, and defining an inner space;
a wafer boat having a circumference provided in said inner space and holding plural
wafers spaced from one another in a predetermined direction;
an inner tube provided between said wafer boat and said outer tube and elongated in said
predetermined direction; and
a gas feeder provided between said inner tube and said wafer boat extending partially
around the circumference of the wafer boat, connected to a said gas inlet port and defining a gas
passage gradually reduced in cross section in said predetermined direction, and formed with a
plurality of like gas outlet holes equal in open area and equally spaced in said predetermined
direction for blowing said gas to said wafers,
wherein said gas feeder has a narrow end surface, a wide end surface, a convex outer surface extending between said narrow end surface and said wide end surface, a concave inner surface extending between said narrow end surface and said wide end surface and spaced from said convex outer surface and semi-cylindrical side surfaces connected between one of the side lines of said convex outer surface and one of the side lines of said concave inner surface and between the other of said side lines of said convex outer surface and the other of said side lines of said concave inner surface, and said gas inlet port is connected to said gas feeder at a position closer to said wide end surface than said narrow end surface.

HAYES SOLOWAY P.C.
130 W. CUSHING ST.
TUCSON, AZ 85701
TEL. 520.882.7623
FAX. 520.882.7643

175 CANAL STREET
MANCHESTER, NH 03101
TEL. 603.668.1400
FAX. 603.668.8567

Serial No. 09/819,516
Docket No. NEC N00-1101
Amendment D under Rule 116

Claim 21 (previously presented): The gas treatment apparatus as set forth in claim 20, wherein said gas outlet holes are formed in said inner concave surface on a virtual line extending from said wide end surface toward said narrow end surface.

Claim 22 (previously presented): The gas treatment apparatus as set forth in claim 20, wherein said outer convex surface and said inner concave surface are opposed to the inner surface of said outer tube and said wafer boat, respectively, and said gas outlet holes are formed in said inner concave surface.

Claim 23 (previously presented): The gas treatment apparatus as set forth in claim 21, wherein said virtual line is a generating line of said concave inner surface, and is substantially in parallel to a centerline of said wafer boat.

Claim 24 (previously presented): The gas treatment apparatus as set forth in claim 20, wherein said wide end surface has a generally crescent shape.

Claim 25 (currently amended): ~~The gas treatment apparatus as set forth in claim 13,~~
A gas treatment apparatus comprising:

an air-tight vessel having a gas inlet port connected to a gas supply system, a gas outlet port connected to an exhaust system and an inner space defined therein;

a retainer having a circumference provided in said inner space and retaining plural wafers arranged at intervals; and

a gas feeder connected at one end portion thereof to said gas inlet port and having a gas passage reduced in cross section from said one end portion toward another end portion of said gas feeder and a plurality of like gas outlet holes equal in open area and equally spaced along a

HAYES SOLOWAY P.C.
130 W. CLUSHING ST.
TUCSON, AZ 85701
TEL. 520.882.7623
FAX. 520.882.7643

175 CANAL STREET
MANCHESTER, NH 03101
TEL. 603.668.1400
FAX. 603.668.8567

Serial No. 09/819,516
Docket No. NEC N00-1101
Amendment D under Rule 116

virtual line connected to said gas passage for blowing said gas toward said plural wafers, said gas feeder extending partially around the circumference of the retainer,

wherein said gas feeder has a narrow end surface, a wide end surface, a convex outer surface extending between said narrow end surface and said wide end surface, a concave inner surface extending between said narrow end surface and said wide end surface and spaced from said convex outer surface and semi-cylindrical side surfaces connected between one of the side lines of said convex outer surface and one of the side lines of said concave inner surface and between the other of said side lines of said convex outer surface and the other of said side lines of said concave inner surface, and said gas inlet port is connected to said gas feeder at a position closer to said wide end surface than said narrow end surface.

Claim 26 (previously presented): The gas treatment apparatus as set forth in claim 25, wherein said gas outlet holes are formed in said inner concave surface on a virtual line extending from said wide end surface toward said narrow end surface.

Claim 27 (previously presented): The gas treatment apparatus as set forth in claim 25, wherein said outer convex surface and said inner concave surface are opposed to an inner surface of said air-tight vessel and said retainer, respectively, and said gas outlet holes are formed in said inner concave surface.

Claim 28 (previously presented): The gas treatment apparatus as set forth in claim 26, wherein said virtual line is a generating line of said concave inner surface, and is substantially in parallel to a centerline of said retainer.

Claim 29 (previously presented): The gas treatment apparatus as set forth in claim 25, wherein said wide end surface has a generally crescent shape.

HAYES SOLOWAY P.C.
130 W. CUSHING ST.
TUCSON, AZ 85701
TEL. 520.882.7623
FAX. 520.882.7843

175 CANAL STREET
MANCHESTER, NH 03101
TEL. 603.668.1400
FAX. 603.668.8567